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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,573	02/26/2001	Shinichi Suzuki	KIX0136-PCT	7885

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EXAMINER

ANDUJAR, LEONARDO

ART UNIT PAPER NUMBER

2826

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/763,573

Applicant(s)

SUZUKI ET AL.

Examiner

Leonardo Andújar

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02/20/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Acknowledgment***

1. The amendment filed on 02/20/2003, paper no. 10, in response to the Office action mailed on 08/28/2002 has been entered. The present Office action is made with all the suggested amendments being fully considered. Accordingly, pending in this Office action are claims 10-12.

### ***Election/Restrictions***

2. Applicant's election without traverse of Group I (claims 1, 5-8 and 10-12) in Paper No. 7 is acknowledged.

### ***Priority***

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on perpendicular 08/31/1998.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura (US 5,495,125) in view of Sugano et al. (US 5,198,888).

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6. Regarding claim 10 Uemura shows most aspects of the instant invention (see paragraphs 6-7). However, Uemura does not explicitly disclose a substrate including:

- A main surface formed with a predetermined wiring pattern;
- A plurality of connection pads formed in the main surface;
- And a trough hole corresponding to a shape of the protective package;

7. Therefore, Uemura does not disclose that the protective package is fitted into the through hole and the outer portions of the first and second leads connected to the pads.

Sugano (e.g. figs. 4-7) shows a circuit substrate including:

- A predetermined wiring pattern (10a, 12a) formed in the first surface (right surface);
- A second surface opposite to the first surface (left surface);
- A plurality of connection pads 10a formed in the first surface;
- And a trough hole corresponding to a shape of a protective package 8a;

8. Also, the protective package is fitted into the through hole of the substrate while partially projecting beyond the first and second surfaces of the substrate, the outer portions of the leads 3a are connected with the connecting pads (e.g. fig. 18). Sugano discloses that this type of embodiment provides an increased mounting density (col. 2/lls. 1-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a circuit substrate having a predetermined wiring pattern, connections pads and a through hole corresponding to the shape of the protective package disclosed by Uemura in order to provide an increased mounting density as suggested by Sugano.

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9. Regarding claim 11, Sugano shows that the connections pads are disposed around the through hole.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura (US 5,495,125) in view of Sugano et al. (US 5,198,888) in view of Toshiba (JP 01-120875)

11. Regarding claim 12, Uemura in view of Sugano shows most aspects of the instant invention. Uemura in view of Sugano does not explicitly disclose that the first surface of the substrate and the mounted the device can be laminated with a coating member. Toshiba discloses the idea of coating the main face with a resin that has a screening effect. It would have been obvious to one of ordinary skill in the art at the time the invention was made to laminate the first substrate surface and the mounted device to make the surfaces of the device disclosed by Uemura in view of Sugano having a screening effect.

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura (US 5,495,125) in view of Sugano et al. (US 5,198,888) in view of Matsushita (JP 48-93284)

13. Regarding claim 12, Uemura in view of Sugano shows most aspects of the instant invention. Uemura in view of Sugano does not explicitly disclose that the first surface of the substrate and the mounted the device can be laminated with a coating member. Matsushita discloses the idea of coating for the purpose of passivation. It would have been obvious to one of ordinary skill in the art at the time the invention was

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made to laminate the first surface and the mounted device disclosed by Uemura in view of Sugano in order to passivate the surfaces as suggested by Matsushita.

### ***Response to Arguments***

14. Applicant's arguments filed 03/03/03 have been fully considered but they are not persuasive. Applicant argues that the Examiner has improperly equated each of the connectors 9a-9d with the claimed circuit substrate of the present invention. Nonetheless, Sugano clearly shows that the connectors 9a-9d are circuit substrates that receive resin packages such as the one shown in fig. 3. The substrate 20 is a motherboard.

15. Applicant argues that the protective package is not considered to partially project the first and second surfaces of the substrate. Initially, first and second opposite surfaces do not necessary mean "top and bottom substrate surfaces". For example, fig. 4 shows that the substrate 9a has a first surface and a second surface opposite to the first surface. In the instant case, the right surface is recognized as the first surface whereas the left surface is recognized as the second surface. As shown in fig. 18 the resin package partially projects the first and second surfaces.

16. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a protective package projecting above and below beyond the two opposite surface of the connector) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

**Conclusion**

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

18. Papers related to this application may be submitted directly to Art Unit 2826 by facsimile transmission. Papers should be faxed to Art Unit 2826 via the Art Unit 2826 Fax Center located in Crystal Plaza 4, room 3C23. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2826 Fax Center number is **(703) 308-7722** or **-7724**. The Art Unit 2826 Fax Center is to be used only for papers related to Art Unit 2826 applications.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Leonardo Andújar** at **(703) 308-0080** and between the hours of 9:00 AM to 7:30 PM (Eastern Standard Time) Monday through Thursday or by e-mail via [Leonardo.Andujar@uspto.gov](mailto:Leonardo.Andujar@uspto.gov). If attempts to reach the examiner by

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telephone are unsuccessful, the examiner's supervisor, Nathan Flynn, can be reached on (703) 308-6601.

20. Any inquiry of a general nature or relating to the status of this application should be directed to the **Group 2800 Receptionist** at **(703) 305-3900**.

21. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass (es): 257/099, 666, 691 and 777	04/02
Other Documentation:	
Electronic Database(s): East (USPAT, US PGPUB, JPO, EPO, Derwent, IBM TDB)	04/02

**Leonardo Andújar**

Patent Examiner Art Unit 2826

LA

4/18//03

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